UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604-3590

Reply to the Attention Of: SR-6J

March 26, 2008

Via E-mail and Certified Mail

Jennifer Hale
Weyerhaeuser Company
Environment Health & Safety, WTC 2G2
P.O. Box 9777
Federal Way, WA 98063-9777

RE: Remedial Design Workplan
12th Street Landfill, Kalamazoo River Superfund Site Operable Unit #04
Plainwell, Michigan

Dear Ms. Hale:

The United States Environmental Protection Agency (EPA) and Michigan Department of Environmental Quality (MDEQ) have reviewed RMT's Remedial Design Workplan (RDWP) for *12th Street Landfill, Kalamazoo River Superfund Site Operable Unit #04, Plainwell, Michigan*, dated February 21, 2008. EPA disapproves of the RDWP at this time. EPA requests that Weyerhaeuser or their representatives address the comments that follow in this letter and submit a revised RDWP for EPA and MDEQ review. The revised RDWP is due thirty days after the receipt of this letter.

General Comments

1. Portable Document Formats (PDFs) created directly from the electronic files, instead of being scanned, provide the ability to search for words or phrases. Future submittals which are searchable would expedite the document review.

2. Please include an "Acronyms and Abbreviations" in this Workplan.

Specific Comments

1. Page 4, Section 2.2.1, third paragraph. "Historical aerial photographs show that disposal of paper residuals did not extend beyond 12th Street at the south end of the landfill property." Is there any investigation data supporting this, since it was stated there was not a berm constructed at the southern end? Please explain how the southern extent of residuals will be determined.

2. Page 8, Section 3.2. The Record of Decision (ROD) quite clearly numbers and identifies the "major components" of the remedy, but this section appears to provide a less than complete recounting of the components from the ROD. The section should be consistent with the work identified in the ROD (e.g. numbered items 1 through 11 in ROD). Please change the structure of the section so that it follows that used in the ROD.

3. Page 8, Section 3.2.1. The ROD requires that the buffer zone "shall be of sufficient size ...to provide for a hydraulic separation between the waste and the surface water". The RDWP briefly mentions the requirement in the ROD for hydraulic separation at the landfill. This needs to be discussed in greater detail within this section.

4. Page 9, Section 3.2.3. "Erosion protection is to be installed on the sidewalls of the landfill, sufficient to provide protection from a 500-year flood event. The erosion protection is to extend to a minimum of 2 feet above the 100-year flood elevation..." Please correct this discrepancy.

5. Page 9, Section 3.2.4. Short-term monitoring is vague here, whereas long-term monitoring is more specific. Additional description of short-term monitoring to be done would be appropriate. What are the samples to be collected and what parameters will be analyzed for surface water and air?

6. Page 12, Section 3.3, "Channel dewatering and residuals removal", last sentence. This section should also state what was done with soil excavated from the bank that did NOT contain visible residuals.

7. Page 13, Section 3.3, last bullet. It is indicated that erosion protection and sidewall containment were installed on the eastern slope of the landfill. The Emergency Action only provided for "Intermediate Cover on Side Slopes" as such side wall containment has yet to be conducted. The cover on these slopes must be evaluated before it can be determined to be final.

8. Page 16, Section 4.1.3. The property on the southwest side of the landfill is an active asphalt plant and not a gravel quarry.

9. Page 17, Section 4.1.4 On-Site Groundwater Occurrence and Flow, last paragraph. Groundwater occurrence, flow direction and gradients have been established during the investigations while the dam is in place. There is a radial component of flow at the site that is believed to be due (in part) to that induced by the flow around the dam. Is there a need to estimate or model groundwater flow after dam removal to ensure the assumptions made are correct? How will the predicted change in groundwater flow affect the need for leachate collection and the design for the long-term monitoring network? After the groundwater returns to its "pre-dam" condition, flow directions on the site should be characterized for design purposes. The assumption that flow will be toward the river is not sufficient because there are wetlands to the north and west of the site. The remedial design work plan needs to include these elements.

10. Page 18, Section 4.2 Wetlands, last paragraph. Identification of the source of freestanding water could be a significant issue during design and/or future actions. Please support the statement that "Frequent or sustained periods of inundation, such as would occur from overbank flooding, were not noted or observed in the wetland area immediately adjacent

to the 12th Street Landfill." Site visits that correspond to periods of flooding and the severity of the event should be referenced. Additional support attributing standing water only to rain events is required.

11. Page 18, Section 4.3.1, first paragraph. The fifth sentence should be revised to "These results will be used to estimate the settlement of the landfill under final closure conditions..."

12. Page 19, first paragraph. The believed location of the berm (from aerial photographs or the Test Pit Investigation) should be discussed relative to the Geoprobe® investigation during the Emergency Action.

13. Page 19, second paragraph. Are these estimates of cover depth consistent with the observations made during the Emergency Action? Include those observations in the discussion of cover depth.

14. Page 19, Section 4.3.3. This section does not adequately consider potential issues associated with landfill gas. The nature of the waste (high organic content) is conducive to gas generation. Where caps have been placed at other disposal units (OU1 and OU3) gas vent systems have been required with some work necessary to intercept migrating landfill gas. Statements should be consistent with Section 5.2. Further, in our January 9, 2008 meeting, Weyerhaeuser stated that they wanted to be proactive about landfill gas issues and implement a gas collection system at 12th Street.

15. Page 20, Section 4.4, paragraph 3, last sentence. Do the concentrations of PCBs in the 159 samples suggest the presence of residuals at additional locations within the wetland, even if they were not observed?

16. Page 21, Section 4.5, last sentence. Why isn't the elevation appropriate for habitat characterization? What data would be appropriate? Please provide explanations.

17. Page 22, Section 5, second paragraph. "Decontamination water will be discharged to the landfill surface at a rate that allows infiltration into the landfill without running off the landfill." Decontamination water should be collected, contained, and appropriately disposed offsite per typical investigation procedures. The same comment applies to the bulleted discussion in Section 5.1.

18. Page 22, Section 5.1, first and second bullets. Since all 11 of the Geoprobe borings will be advanced onsite, and the purpose of the borings is to assist in implementing the RA offsite, are there plans to advance additional borings offsite if access can be secured before the remedial design? If not, why?

19. Page 24, bullet 2 of 4. Please discuss the decision criteria to be used to determine if additional test pits would be required and the locations for the test pits.

20. Page 24, bullet 3 of 4. Please explain why decontamination of equipment between test pits should not be required.

21. Page 24, bullet 3 of 6. Please discuss the decision criteria to be used to determine if additional test pits would be required and the locations for the test pits.

22. Page 25, Section 5.4. A review of existing data regarding the design of a leachate collection system appears to have been performed since the section concludes with the statement "No additional field information is needed." If the current evaluation suggests that no additional data is required, then a preliminary determination of the need for leachate collection should be included in the text similar to the discussion on landfill gas in Section 5.2.

23. Page 25, first paragraph. The use of alternative equipment would result in different dimensions for test pits. The different alternatives to the standard method for test pit excavation should be presented with the respective width, depth, or other criteria for each method. If alternative excavation methods are necessary, EPA approval of the method is required before excavation can occur.

24. Page 27, Section 6, paragraph following four bullets. The text seems to infer that the USEPA will review a "draft Design Report" but then gets no other review before the final Design Report is issued. The schedule shown on Figure 11 indicates the USEPA reviews the "Preliminary Design Report" and reviews the Final Design Report. The review plan as described in the schedule seems fine, and it should be made clear in the text (including changing "draft" to "Preliminary").

25. Pages 27-28. The 6th bullet (in the Design Report component list) identifies "Number and Location of Monitoring Wells". The design and construction of the monitoring wells at the landfill operable units has been a particularly important aspect of the landfill monitoring well network designs. This is due to the challenges uniquely posed by the hydrogeology at the landfills and the transport mechanisms of the contaminants of interest. The Design Report should include the well construction details and any methods used for determining those details (e.g., for determining screen placement). This may already be assumed, but the bullet should include "well construction detail" for clarity.

26. Page 28. How detailed will the specifications be in the Preliminary Design Report submittal? Typically, the list of specification sections are provided, but the sections haven't yet been developed. Since, Weyerhaeuser intends to submit a Preliminary design report that is greater than 30% complete, greater detail on the contents of the Preliinary Design Report are required here.

27. Page 30, Section 8.2.1. The database maintained by the respondents will be submitted to the Agencies electronically in a mutually agreed to format (MS Access .mdb file preferred) and clearly marked: Initial Deliverable. It will be a comprehensive database submittal ranging from [start date] through [end date]. It will be followed by subsequent deliveries which will be incremental additions to the database. These submittals will range from [start date] through [end date] and will not overlap with previous deliveries.

28. Page 31, Section 8.3, first paragraph. Instead of monthly reports, EPA requires that the progress reports be submitted bi-weekly during construction activities. In addition to those formal progress reports, informal reports shall be submitted electronically on a weekly basis during construction activities.

29. Page 31, Section 8.4. In addition to submitting 2 copies of plans to the State, arrangements should be made for concurrent delivery of an electronic copy via CD, DVD or internet field transfer protocol site.

Multi-Area QAPP

1. QAPP Worksheet #16-3. Change "Draft remedial design" to "Preliminary remedial design" for both occurrences in this table.

Multi-Area FSP

1. Page 13, Section 2.4.1, third bullet, first sentence. "Prepare a Soil Boring Log (refer to Appendix B for a sample log)..." This is Appendix B—to avoid confusion, change appendices to attachments within individual appendices.
2. Page 14, third whole bullet. "Dispose Geoprobe® samples onsite. Containerize the decontamination water in 55-gallon barrels that will be properly labeled and stored on site." Decontamination water should be disposed offsite in an appropriate manner, and that should be stated here as well. The language included on p. 23 (fourth bullet) in the main body of the draft RD Work Plan should be changed to state the same thing.
3. Page 14, sentence after 4th bullet. The reference to Appendix A was confusing, but can be corrected by changing appendices to attachments within individual appendices.
4. Page 16, section 2.4.2. Remove the extra word "based" in the second sentence.

If you have any questions about these comments, please contact me at (312) 353-8983.

Sincerely,

Michael Berkoff

Michael Berkoff
Remedial Project Manager